

What is claimed is:

1. A wireless communication device driven by an internal power supply, comprising: disturbance component extracting means for extracting from a signal received by a receiving antenna a disturbance component which may affect the device's wireless communication signal; disturbance wave periodicity detecting means for detecting the radiation period by comparing the disturbance component extracted by said disturbance component extracting means with a frequency-divided signal obtained at a gradually varying frequency dividing ratio with respect to a clock signal of a predetermined frequency; and communication control means for performing the exchange of a communication packet during a radiation-free period of time within the radiation period detected by said disturbance wave periodicity detecting means.

2. The wireless communication device according to claim 1, wherein said disturbance wave periodicity detecting means comprises a frequency dividing circuit for gradually increasing a frequency dividing ratio with respect to an input clock signal of a predetermined frequency and a period determination circuit for determining the period of a disturbance wave by comparing a signal received by a receiving antenna with a frequency-divided signal from said frequency dividing circuit.

3. The wireless communication device according to claim 1 or 2, wherein said communication control means comprises communication connection continuing means for shifting the

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transmission frequency of a control signal to keep the
communication connection established into a preset
disturbance-free frequency band to continue the communication
connection when the radiation period of a disturbance wave
5 is detected by said disturbance wave periodicity detecting
means.

4. The wireless communication device according to
claim 1, wherein said communication control means comprises
transmission means for notifying of the presence and period
10 of a disturbance wave any communication partner which cannot
detect the presence of the disturbance wave when the radiation
period of a disturbance wave is detected by said disturbance
wave periodicity detecting means.

5. The wireless communication device according to claim
15 1, comprising power control means for controlling the power
depending on the radiation period of the disturbance wave
detected by said disturbance wave periodicity detecting means.

6. The wireless communication device according to claim
5, wherein said power control means is configured to determine
20 whether a communication packet can be transmitted when the
radiation period of a disturbance wave is detected by said
disturbance wave periodicity detecting means, and to
discontinue the power control when the communication packet
cannot be transmitted.

25 7. The wireless communication device according to
claim 2, wherein said communication control means comprises
transmission means for notifying of the presence and period

of a disturbance wave any communication partner which cannot detect the presence of the disturbance wave when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

5 8. The wireless communication device according to claim 3, wherein said communication control means comprises transmission means for notifying of the presence and period of a disturbance wave any communication partner which cannot
10 period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

 9. The wireless communication device according to claim 2, comprising power control means for controlling the power depending on the radiation period of the disturbance wave
15 detected by said disturbance wave periodicity detecting means.

 10. The wireless communication device according to claim 3, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting
20 means.

 11. The wireless communication device according to claim 4, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting
25 means.

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